

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the limitations of "of which" does not clearly point out the preceding aspects of the claimed subject such as the rotary shaft, the flange, circular section, and etc. Applicant is reminded to See MPEP 2111. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969) The court explained that "reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from 'reading limitations of the specification into a claim,' to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim." To further prosecution, the "of which" limitation is regarded as the rotary shaft.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, the limitation of "the radially inner and radially outer surfaces of the cavity being opposed to radially inner and radially outer surfaces, respectively, of the inertia mass" is at odds with Applicant's Specification. As written and considering the proper use of 'respectively', the cavity's inner surface would oppose the mass's inner surface and the cavity's outer surface would oppose the mass's outer surface. As best understood, this arrangement would require the surfaces to be one of the same. If there is support in Specification, Examiner respectfully asks Applicant to highlight this arrangement. To further prosecution, the cavity is in contact with the mass.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins et al. (US Patent No. 6,190,137).

With regards to claim 1, the patent to Robbins et al. discloses all the limitations of the claimed subject matter including a rotary shaft (i.e. crankshaft 40, Col. 3, Lines 34-38, See Figure 1) for rotation about an axis and carrying an eccentric, substantially circular section (112), radially extending flange (112, Col. 3, Lines 49-51, See Figure 3), connected to the radially outer surface of the rotary shaft is an annular housing affording

a cavity (i.e. the interior space of 124, See Figure 3D and Col. 5, Lines 26-30) defined in part by radially inner and radially outer coaxial cylindrical surfaces (See Figure 3D), the axis (120, Col. 5, Lines 60-65) of which is offset from the axis of the shaft (104, Col. 6, Lines 10-15, See Figure 3C), the cavity accommodating an annular inertia mass (116, See Figure 5, Col. 7, Lines 35-40), the cavity (i.e. the interior space of 124, See Figure 3D and Col. 5, Lines 26-30) being in contact with the inertia mass (116), whereby there are two pairs of opposed surfaces (See Figure 5), one of the said pairs constituting bearing surfaces guiding relative rotation of the inertia mass (116) and the housing (124) about the axis of the coaxial cylindrical surfaces (See Figure 5), the other of the said pairs being spaced apart to define an annular space (142) accommodating a displaceable material (142), the inertia mass (116) and the cavity (124) having a dimension in the radial direction which has a maximum value at a first position opposite to the direction of eccentricity and decreases progressively in both circumferential directions to a second position offset by angle from the first position (via 138, See Col. 7, Lines 45-65 and Col. 8, Lines 25-35), except positively disclosing the offset being 180 degrees.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the angular displacement of the inertia mass of Robbins et al. with a 180 degrees offset, because the modification is invariably a change in dimension. See MPEP 2144.04. In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. CIR. 1984), cert. Denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims

was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

With regards to claim 2, the patent to Robbins et al. discloses the displaceable material is a viscous liquid (i.e. oil, Col. 4, Lines 40-45).

With regards to claim 3, the patent to Robbins et al. discloses the viscous liquid comprises a grease (i.e. oil, Col. 4, Lines 40-45).

With regards to claim 4, the patent to Robbins et al. discloses the housing (i.e. interior cavity of 124) is closed by a cover plate (i.e. surface of 124) extending in a radial plane.

With regards to claims 8-11, the patent to Robbins et al. discloses spring means (spring 140 via 138) acting on the inertia mass (116) and biasing it towards a position in which the radial width of the space is constant.

With regards to claim 12-19, the patent to Robbins et al. discloses wherein the thickness in the axial direction of the portion of the housing (i.e. interior surface of 124) opposite to the direction of eccentricity is greater than that of the eccentric flange (See Figures 1-5).

With regards to claim 20, the patent to Robbins et al. discloses a rotary shaft (40) for rotation about an axis and carrying at least one pair of axially spaced, radially extending eccentric crankwebs (i.e. 116), at least one of which has a circular cylindrical radially outer surface, the axis of which is offset from the axis of the crankshaft (40) and connected to which is the inner surface of an annular member of resilient material (i.e. steel, Col. 4, Lines 60-65), connected to the outer surface of which is the cylindrical inner surface of a annular inertia mass, the weight distribution of which counterbalances the eccentricity of the associated crankweb (116, See Figures 1-5).

As to the limitation of "automotive crankshaft", Applicant is reminded to See MPEP 2111.02, Section II. Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999). See also Rowe v. Dror, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997) ("where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation");

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bae et al. (US Patent No. 7,249,936) shows the current state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEITH COLEMAN whose telephone number is (571)270-3516. The examiner can normally be reached on 5:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Cronin can be reached on (571)272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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